



Keynote speaker Paul Kjellander, administrator of Idaho's Office of Energy Resources, addresses participants at the "Carbon Management in Idaho" workshop held at Boise State University.

Workshop generates ideas on carbon management in Idaho

by Marilyn Whitney, *INL Communications*

As the United States moves to address climate change amid today's energy supply issues, the prospect of a carbon-constrained future presents a daunting challenge for researchers and policy makers alike. The Center for Advanced Energy Studies (CAES) recently brought together representatives from industry, government and academia to explore the issues and opportunities of carbon management in Idaho.

Sponsors who joined CAES in presenting the workshop at Boise State University included the Big Sky Carbon Sequestration Partnership, Idaho Power, Idaho National Laboratory, enTech, Idaho State University, Boise State and the University of Idaho.

Workshop presentations and panel discussions encompassed climate change, regulation and legislation, geologic and terrestrial sequestration, carbon markets and the future of energy in the Northwest. Participants included representatives from Idaho Department of Environmental Quality, Department of Agriculture, Bureau of Land Management, Environmental Protection Agency, U.S. Forest Service, Idaho Farm Bureau, Northwest Power and Conservation Council, Idaho's universities, public utilities, industry and Idaho legislators.

In his opening address, Idaho Office of Energy Resources Administrator Paul Kjellander discussed the current energy crisis and the difficult decisions consumers must make based on increasing prices. Specific energy issues facing Idaho include dependence on imported energy, a transmission system that is at or near capacity and the higher cost of new energy generation sources. Kjellander stressed the importance of looking at all options as Idaho charts the course for its energy future.

INL Carbon and Water Management technical lead Craig Cooper, tackled the implications associated with reducing greenhouse gas emissions. As a large importer of energy, Idaho would experience a significant impact from carbon emissions regulation. While the state has enjoyed historically low electricity prices, imported energy is largely generated by coal-fired operations, which would pass increases due to carbon regulation on to Idaho ratepayers. However, as Cooper noted, Idaho does have the opportunity to offset carbon regulation with exempt agricultural emissions, and the state does have untapped capacity for low-carbon energy generation.

Dr. Sian Mooney, Boise State University associate professor of economics, provided an overview of the wide array of carbon credit markets and prices. She highlighted the difference between credits and offsets and detailed specifically what is traded (carbon dioxide, methane, nitrous oxide). Dr. Mooney also pointed out that while none of the greenhouse gas bills introduced in Congress resulted in federal legislation, there are several state initiatives implemented to reduce greenhouse gases including those in neighboring states of Oregon and California.

The focus on public policy continued with luncheon speaker, Rep. Thomas Lubnau II, who represents House District 31 in the Wyoming Legislature. Lubnau has been a driving force in the framing of Wyoming's carbon storage legislation.

Karl Bokenkamp, Idaho Power's general manager of Power Supply Operations and Planning, provided insight into that utility's resource-planning process. Idaho Power has plans to develop new energy resources and technologies – including natural gas, wind and geothermal – to address the future energy needs of Idaho. However, Bokenkamp emphasized that there are no low-cost supply-side options, with most significantly higher than those built into the current rate base.

On the workshop's second day, Dr. John Freemuth, BSU professor of political science and interim associate director of CAES, addressed the difficulty of moving forward with carbon management given current federal land policy. He also stressed the need for continued spending on research and development of energy resources across the board and the need for constructive public engagement on climate change and energy issues.



INL's Craig Cooper and Jennifer Pierce with BSU's Department of Geosciences answer questions about climate change issues and implications for carbon management.

INL carbon sequestration researcher Travis McLing covered the technical issues with geologic carbon



INL researcher Travis McLing details the technical issues, challenges and opportunities associated with carbon capture and geologic sequestration.

sequestration including cost, long-term uncertainties with storage and potential financial liability. McLing, a member of Idaho Gov. C.L. "Butch" Otter's Carbon Advisory Committee, echoed the need for increased funding for research, development and demonstration of carbon capture and storage technology.

Additional presenters covered carbon capture and storage partnerships in the region, forests as energy and terrestrial sequestration sources, carbon capture and storage infrastructure challenges, and production of biogas to reduce greenhouse gas emissions.

In the workshop's closing session, Bob Smith, with the University of Idaho in Idaho Falls and associate director for research for CAES, highlighted key takeaway points. Among those were that uncertainty over carbon regulation could cloud the energy future and lead to higher costs; increased efficiency and conservation are the "low-hanging" fruit as the nation seeks solutions to its energy challenges; and infrastructure for carbon capture and storage is currently complex and costly. Presenters and participants discussed next steps and ways to continue the dialogue on carbon management.

CAES plans to use the ideas and outcomes of the workshop to help shape research activities to address the energy needs of Idaho and help prepare businesses and citizens of the state for a transition to a carbon-constrained future.

[Read more about the workshop and presentations.](#)

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